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EXAMINER

PASTERCZYK, J

ART UNIT

PAPER NUMBER

1755

*20*

DATE MAILED:

10/17/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

**Office Action Summary**Application No.  
**08/961,956**Applicant(s)  
**Royo et al.**Examiner  
**J. Pasterczyk**Group Art Unit  
**1755**☒ Responsive to communication(s) filed on Aug 14, 2000☒ This action is **FINAL**.☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

**Disposition of Claims**☒ Claim(s) 56-108 is/are pending in the application.Of the above, claim(s) 94-107 is/are withdrawn from consideration.☐ Claim(s) \_\_\_\_\_ is/are allowed.☒ Claim(s) 56-93 and 108 is/are rejected.☐ Claim(s) \_\_\_\_\_ is/are objected to.☒ Claims 56-108 are subject to restriction or election requirement.**Application Papers**☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.☒ The drawing(s) filed on Oct 31, 1997 is/are objected to by the Examiner.☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.☐ The specification is objected to by the Examiner.☐ The oath or declaration is objected to by the Examiner.**Priority under 35 U.S.C. § 119**☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been☒ received.☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).**Attachment(s)**☒ Notice of References Cited, PTO-892☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_☐ Interview Summary, PTO-413☐ Notice of Draftsperson's Patent Drawing Review, PTO-948☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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1. This Office action is in response to the amendment filed 8/14/00 and refers to the Office action mailed 8/12/99. Because of the restriction requirement in the original claims and the cancellation of all original claims and their replacement with all new claims, claims 56-93 and 108 are under consideration, with claims 94-107 withdrawn as drawn to a nonelected invention. The election of species in which the cocatalyst is an aluminum compound is also considered to still be in effect.

2. The drawings are objected to because in corrected figure II, the middle structure on the right has a Me group detached from its silicon atom. Correction is required.

3. Claims 56-93 and 108 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 56, 57, 65, 66, 75 and 84, "linear cycloalkyl, linear aryl, branched cycloalkyl, and branched aryl" all make no sense since aryl groups cannot be branched themselves, nor does linear even apply to the class of group, nor can a purely cycloalkyl group have branches nor does linear apply to the class of group.

In claims 56, 65 and 66, it is not clear what is meant by "according to a value of c".

In claims 56, 65 and 66, defining G as being an atom selected from groups 15 and 16 of the periodic table and boron without requiring at least one of the G groups to be a cyclopentadienyl-containing group is contrary to the definition earlier in the claims that these compounds are necessarily metallocenes.

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In claims 56, 65 and 66, defining  $x + y$  to be 4 is contrary to the metal being either from group 3 or being a lanthanide other than cerium, since these other metals can only be in the 3+ oxidation state in order to give an electrically neutral compound as these appear to necessarily be.

In claims 59, 77 and 86, in the second line of each, the siloxy group should have a subscript 3 after the R”.

In claims 57, 61, 62, 75, 79, 80, 84, 88 and 89, the variable R' is undefined.

In claim 61, insert --and-- before “propyl” in the penultimate line. Similarly in claims 79 and 88.

Claims 65 and 66 lack steps that include addition of the required cocatalyst. In the third line of step (a) of claim 66, it is not clear what is meant by “heterogenize”.

Claim 70 is merely a repeat of claim 58 and thus fails to further limit it.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 56-64 and 69-74 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over any of Vega, Gila I, Antberg, or Patsidis as cited in and for the reasons of record given in paragraphs 12 and 13 of the previous Office action.

6. Claims 56-64 and 69-74 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gila II as cited in and for the reasons of record given in paragraph 14 of the previous Office action. Again, the claims are read as product-

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by process claims with the process being the combination of the metallocene with the support, the product reading on that presently claimed.

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7. Claims 56-108 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Vega, Gila I, Gila II, Antberg or Patsidis in view of Huh et al., USP 5,986,025 (hereafter referred to as Huh).

The disclosures of the primary references have been discussed before.

The primary references lack specific disclosure of reacting a metallocene having a siloxy group with a support having reactive groups.

However, Huh at col. 2, l. 30 through col. 4, l. 14 teaches that such a reaction may be used to secure a metallocene to the surface of a support.

It would have been obvious to one of ordinary skill in the art to apply the teaching of Huh to the disclosures of any of Vega, Gila I, Gila II, Antberg or Patsidis with a reasonable expectation of obtaining a highly-useful method of making a supported metallocene and the resulting composition with the expected benefit of the metallocene being firmly fixed to the support and thus usable in slurry or gas phase polymerizations.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The other prior art is cumulative with Huh, but one of the references has a bad date.


9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is (703) 308-3497. Our fax number is 305-5433.

  
Mark L. Bell  
Supervisory Patent Examiner  
Technology Center 1700



J. Pasterczyk

October 11, 2000